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CENTRAL INTELLIGENCE AGENCY

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COUNTRY Czechoslovakia

SUBJECT DC Electric Drives Produced by MEZ Vsetin

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1. Spolana, National Enterprise, in Neratovice (N 50-16, E 14-31) built six new production lines for viscose rayon fiber. Each line was 400 meters long. The delivery of electric drives for these lines was the joint responsibility of MEZ in Vsetin (N 49-20, E 18-00), MEZ in Brno-Zidenice, MEZ in Postrelmov (N 49-55, E 16-55), and EZ (Works for Assembly and Installation of Electric Equipment) in Prague. MEZ in Vsetin was responsible for the satisfactory operation of the drives. These were DC drives and there was a separate drive for each line. Each drive consisted of seven motors arranged in two groups which drove the individual sections of the line. The first group consisted of two motors; the second group consisted of five motors. All of the motors were small, having an output of about five kilowatts each. Each group was fed by one generator. the generator for the second group developed about 40 kw. Each generator had an amplidyne for speed control. All of the motors were produced by MEZ Zidenice, while the generators were products of MEZ Vsetin. MEZ Postrelmov supplied the panels. 50X1

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the order for the drives was placed with MEZ Vsetin in 1951 and deliveries were begun in 1953. Spolana put the first line in operation in March 1954 and all six lines were operating by the end of 1954. 50X1

2. Buzuluk, National Enterprise, in Komarov, near Horovice (N 49-50, E 13-55) was engaged in production of calenders for use in Soviet rubber factories. The calenders were of three and four cylinders. In 1951, Buzuluk asked MEZ Vsetin about the possibility of producing DC drives for these calenders. MEZ suggested the same type of drive as was being produced for the paper works in Mlade Buky (N 50-36, E 15-52), i.e., a Ward-Leonard set with amplidyne speed control (see paragraph 3 below). The Soviets refused this offer because the DC motor did not comply exactly with the specifications stipulated; consequently, Buzuluk placed the order with CKD Stalingrad. The CKD drive was also a Ward-Leonard set. The diameter of the armature of the DC motor was 46 cm.; the motor had four poles

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and developed an output of 150 kw. at 1,000 rpm. However, the speed of the generator was not controlled by amplidyne since CKD did not produce this type of speed control. Since the Soviets insisted on the use of amplidyne speed control for the drives, the generators were equipped with amplidynes designed by MEZ Vsetin and produced by MEZ Development. The original order was placed with CKD Stalingrad in 1951 and called for six units of the drive; but, it was understood that orders calling for several units of the drive per year would continue to be received. CKD Stalingrad started deliveries in 1953.

3. In 1950, the paper works in Mlade Buky placed an order with MEZ Vsetin for a DC single drive to be used in the production of paper for statistical machines similar to those produced by IBM. MEZ filled this order with a Ward-Leonard set which developed 120 kw. at 1,500 rpm, with amplidyne speed control. Both the DC motor and generator were type M 50 21. The drive was completed in spring 1954 but delivery was not made. The delivery destination had been changed twice -- first, to a paper works [redacted] and then to the Paper Mills in Ruzomberok (N 49-05, E 19-19). As of summer 1954, the Paper Mills in Ruzomberok were not yet ready to accept delivery. [redacted]

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4. MEZ Vsetin produced three DC single drives for the paper works in Harmanec (N 48-49, E 19-03) and the paper works in Slavosovce (N 48-43, E 20-17). They were of a size similar to that described in paragraph 3 above. Two of the units were for Harmanec -- one for the machine referred to in the factory as "number five", the other for their "Yankee type" paper machine. The third unit was destined for Slavosovce; however [redacted] the delivery destination of this unit might be changed to Harmanec. All three drives should be completed during 1955.

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5. MEZ Vsetin also delivered one DC motor with an output of about 15 kw. for use in the DC sectional drive which was to be put in operation at the paper works in Olsany (N 49-32, E 17-10). This DC sectional drive was an AEG product which was probably delivered to Olsany during World War II, but the drive was not complete. In addition to the DC motor which was supplied by MEZ Vsetin, the equipment for automatic synchronization and speed control of the entire drive was missing. This equipment was to be produced by Krizik Development Plant, National Enterprise, in Prague-Karlin. As of late summer 1954, this control equipment had not been delivered. The design of the control equipment was based on Krizik's equipment for maintaining constant frequency and was too complicated for use in speed control of the drive for paper production machinery. The Krizik product was the first Czechoslovak-made speed control equipment for DC sectional drives and, therefore, would serve as a model for future manufacture of this kind of equipment. As a matter of fact, all the DC sectional drives having automatic speed control which were operating in Czechoslovakia were of foreign manufacture. They were AEG, BBC, or Siemens products. For example, the paper works in Vrane (N 49-57, E 14-24) used a BBC sectional drive. Up until the time the Krizik control equipment was produced, Czechoslovakia had produced only DC single drives for use in paper mills. The only exception was the DC sectional drive produced by CKD in Prague-Vysocany, presently known as CKD Stalingrad, in about 1935 for use in the Paper Mills in Ruzomberok. [redacted]

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high time for Czechoslovakia to begin production of DC sectional drives with automatic speed control for use in paper mills. [redacted] Poland had asked about Czechoslovak production possibilities in this field and that there was also a good chance of exporting DC sectional drives [redacted] In 1950, the Austrian firm, Voiht, in St. Poelten (N 48-12, E 15-38) asked MEZ to make an offer regarding DC sectional drives for paper production machinery. The total output requested was 800 kw. The drive was intended for USIA and, therefore, believed to be for the use of the Soviets. MEZ Vsetin made a preliminary offer which was rejected, source believed, because MEZ could give no recommendations concerning past experience in this field.

6. The Development Plant for Machinery for the Manufacture of Rubber Products in Gottwaldov[1] placed an order with MEZ Vsetin in 1949 or 1950 for a DC electric drive for a rubber calender train which was to be installed in the Matador plant in Puchov (N 49-08, E 18-20). Matador was a factory for tire production and the new calender train was to be used for coating the cord with rubber. At the same time, the Development Plant in Gottwaldov placed an order with MEZ for a DC drive to be used with the equipment for treating the cord before it is coated with rubber. The latter order was cancelled; source did not know the reason for cancellation. The drive for the rubber calender train consisted of the following separate drives: a drive for entry cylinders, for the drying machine, for calenders, cooling machine, exit cylinders, and winding cylinders. The calender drive DC motor developed 220 kw. at from 750 to 1,200 rpm, 380 v, 650 amp. The remaining DC motors were of small sizes -- five or 10 kw. The belt was three meters wide and its speed could be regulated from 15 to 60 meters per minute; however, it was understood that 60 meters was to be the constant operation speed. In summer 1954, Matador requested early delivery and MEZ Vsetin promised to deliver the equipment in the autumn of 1954; however, [redacted] not believe that the equipment could be ready before the end of 1954.

7. SHD (Northern Bohemian Lignite Mines) in Most (N 50-32, E 13-39) placed an order with MEZ Vsetin for DC machines to be used in the SHD testing plant.[2] The order was placed about 1949 and called for one type M 80 -- 6-k generator; [redacted] The generator was to develop an output of 300 kw. at 750 rpm, 1,500 v. [redacted] this generator was to be used for testing electric motors in locomotives which may have been in operation at the mines, or for testing locomotives which were to be delivered to the plant by the V.I. Lenin Works in Pilsen. [redacted] electric locomotives were under production at the V.I. Lenin Works about this time. The order also called for one generator and one motor, both of which were type M 71 30-8, developing 300 kw. at 750 rpm, 440 v. [redacted] the motor was to be connected to a synchronous generator, origin unknown [redacted] for generating alternating current of variable frequency. This may indicate that SHD intended their testing plant to be used for general purposes, in addition to testing equipment for mines.

8. MEZ Vsetin manufactured two generators, type M 63 25-8 or M 63 30-8, developing 330 kw. at 980 rpm, 110 v, 3,000 amp., each of which was driven by an induction motor which was also a product of MEZ. One unit was for Milo, National Enterprise, in Olomouc and the other unit was for the Milo plant in Bratislava. These factories produced artificial fats. The generators operated at 90 to 96 v and 2,800 to 3,000 amp. The delivery of the unit for Olomouc was urgently requested because the plant apparently had scheduled operations to begin in July 1952; however, the unit was not delivered until summer 1953. The unit destined for Bratislava

was also delivered in 1953 although no request for urgent delivery had been made. Since the time they were delivered, both units have been returned to MEZ for repairs several times.

9. The Machine Tool Development Plant in Prague-Liben, na Zertvach 24, placed an order with MEZ Vsetin for two DC motors, type M 28 25-4, to be rated for an output of 50 kw. at from 1,500 to 3,000 rpm, 500 v. The order was placed in 1952 and delivery was made in 1953. The motors were fed by mercury rectifiers.

10. In 1949, the Ministry of National Defense ordered a DC motor with an output of 25 kw. at 5,500 rpm from MEZ Vsetin. Delivery had not been made as of summer 1954, mainly because the order made by the Ministry was confused and required further clarification.

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